

Elementary Algebra (MAT 095) Syllabus

Section: T1

Day/Time: TR 4:00 – 5:15 pm

Room: D104

Instructor: Joe Johnson

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3 Credit Hours (These credits do not count towards graduation)

Course Description

This course extends the basic algebra skills acquired in MATH 075. The topics include: signed numbers, solving first-degree equations, exponents, polynomials, factoring, graphing, systems of linear equations, inequalities, radicals and scientific notation.

Required Materials

Acceptable placement score or Math 075 with a “C” grade or better.

Required Materials

Textbook: Beginning Algebra by Elayn Martin-Gay (Fifth edition)

Other: MyMathLab – the homework assignments will be assigned in MyMathLab.

You will need a notebook. You should take notes from the program just as you would in a class. Problems should be worked out as if you were writing them on an exam.

Grades

A student will receive one of the following grades: A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, W, P, or Audit. Determination of your grade will be based on the following:

Test 1: 15%

Test 2: 15%

Test 3: 15%

Final Exam: 25%

Homework: 30%

Grade Equivalents

A	93 - 100	C+	77 -79
A-	90 - 92	C	73 - 76

B+	87 - 89	C-	70 - 72
B	83 - 86	D+	67 - 69
B-	80 - 82	D	63 - 66
		D-	60 - 62
		F	59 or lower

Course Outcomes

The objective of this course is to enable the student to develop an understanding of the algebraic concepts of variables, signed numbers, solutions of linear equations and inequalities, exponents, operations on polynomials, factoring and solutions of quadratic equations by factoring, systems of linear equations, radicals, and the relationship between the line and its equation. See course outcomes detail on attached page for a finer breakdown.

Attendance/Homework/Requirements

It is strongly suggested that students make every effort to attend ALL classes. More than three absences during the semester will jeopardize the student's success in the course. Homework will be assigned on a daily basis. All homework assignments must be completed by the announced due dates. Students will be required to have a two-section math notebook. One section is to be dedicated to class notes while the other section will be dedicated to homework (on MyMathLab). The student's math notebook should be available to the instructor at each class. Students are not allowed to use a calculator and are not allowed to bring in a paper with notes or formulas to class. Cell phones may not be used as a calculator and must be turned off during class.

Methods of Evaluation/Make-ups

Tests will be announced. Tests that are missed for any reason cannot be made up. If a student misses one of the first three tests, a make-up test will be given at the end of the semester. A student can also use this make-up test to replace their lowest test grade.

Withdrawal Policy

Students may withdraw, in writing at the Registrar's Office, for any reason up through December 9. No withdrawals will be accepted after Dec. 9. **Students who do not withdraw, but stop attending will be assigned an "F".**

Disabilities Statement

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the disabilities Counseling Services at 383-3240. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note

that I cannot provide accommodations based upon disability until I have received an accommodation letter from the disabilities counselor.

Tentative Schedule

1	08/30, 09/01	Symbols and Sets of Numbers Intro to Variable Expressions and Equations Adding Real Numbers Subtracting Real Numbers Multiplying and Dividing Real Numbers	1.2, 1.4, 1.5, 1.6, 1.7
2	09/06, 09/08	Properties of Real Numbers Equations, Inequalities and Problem Solving The Addition Property of Equality The Multiplication Property of Equality Solving Linear Equations	1.8, 2.1, 2.2, 2.3, 2.4
3	09/13, 09/15	An Introduction to Problem Solving Formulas and Problem Solving Percent and Mixture Problem Solving	2.5, 2.6, 2.7
4	09/20, 09/22	Further Problem Solving Solving Linear Inequalities 09/22 – Test 1 (Chapters 1, 2)	2.8, 2.9
5	09/27, 09/29	Graphing Graphing Linear Equations	3.1, 3.2
6	10/04, 10/06	Intercepts Slope and Rate of Change	3.3, 3.4
7	10/11, 10/13	Equations of Lines 10/20 – Test 2 (Chapter 3)	3.5
8	10/18, 10/20	Solving Systems of Linear Equations and Inequalities Solving Systems of Linear Equations by Substitution Solving Systems of Linear Equations by Addition	4.1, 4.2, 4.3
9	10/25, 10/27	Systems of Linear Equations and Problem Solving Exponents and Polynomials	4.4, 5.1
10	11/01,	Adding and Subtracting Polynomials	5.2, 5.3, 5.4, 5.5

	11/03	Multiplying Polynomials Special Products Negative Exponents and Scientific Notation	
11	11/08, 11/10	Dividing Polynomials 11/10 – Test 3 (Chapters 4, 5)	5.6
12	11/15, 11/17	Factoring Polynomials Factoring Trinomials of the Form $x^2 + bx + c$ Factoring Trinomials of the Form $x^2 + bx + c$ and Perfect Squares	6.1, 6.2, 6.3
13	11/22, 11/24	Factoring Trinomials of the Form $x^2 + bx + c$ by Grouping Factoring Binomials 11/24 – No class	6.4, 6.5
14	11/29, 12/01	Solving Quadratic Equations by Factoring Roots and Radicals Simplifying Radicals	6.6, 8.1, 8.2
15	12/06, 12/08	Adding and Subtracting Radicals Multiplying and Dividing Radicals Review	8.3, 8.4
16	12/13, 12/15	Final Exam (Cumulative), Makeup	

Course Outcomes Detail:

1. Evaluate algebraic expressions
2. Determining if a given number is a solution to an equation or an inequality
3. Determining if an ordered pair is a solution to a linear equation in 2 variables
4. Add, subtract, multiply, and divide real numbers and raise a real number to an integer power
5. Add, subtract, multiply, and divide Polynomials
6. Simplify, add, subtract, multiply, and divide Radicals
7. Rules for Exponents
8. Greatest Common Factor (factoring)
9. Factor by Grouping
10. Factor trinomials of the form $x^2 + bx + c$
11. Factor trinomials of the form $ax^2 + bx + c$
12. Factor Perfect Square Trinomials
13. Factor the Difference of Two Squares
14. Factor Completely
15. Converting between Scientific Notation and standard notation
16. Order of Operations (manipulation)
17. Properties of Real Numbers (manipulation)
18. Simplifying Algebraic Expressions (manipulation)
19. Graphing in a Rectangular Coordinate System
20. Graphing Linear Equations by plotting points, using intercepts, and using the Slope-Intercept form
21. Graphing the solution to a Linear Inequality in one variable.
22. Graphing a System of Linear Equations in two variables
23. Rates of change (slopes)
24. Identifying Linear Equations (Linearity)
25. Solving Linear Inequalities in one variable
26. Finding the Equation of a Line (manipulation)
27. Solving Linear Equations in one variable
28. Solving formulas for a specified variable
29. Solving a System of Linear Equations in two variables (two methods)
30. Solving equations with degree 2 or greater by factoring
31. Two forms for the equation of a line (transforming back and forth)
32. Finding an unknown number word problem
33. Solving consecutive numbers (including odd and even) word problems
34. Solving dimension problems using geometric formulas
35. Solving Percent and Mixture problems
36. Solving table problems such as rate, time, and distance
37. Solving linear inequality problems
38. Solving linear equation in two variables problems
39. Solving System of 2 linear equations in 2 variables word problems
40. Solving factorable Quadratic Equation word problems

